

CLAIM

1. A data combining apparatus combining first data and second data relating to an image to form a screen comprising:

5 a processing unit for performing predetermining processing on the first data;

a data generation unit for generating the second data;

10 a combining unit for combining the first data processed by the predetermined processing in the processing unit and the second data generated by the data generation unit;

15 a timing information generation unit for generating timing information for the processing of the processing unit or for processing for generation of the data generation unit so that the combination of the first data processed by the predetermined processing in the processing unit and the second data generated by the generation unit is performed at the same timing; and

20 a control unit for correcting a timing for processing or generation to make the processing unit or the data generation unit perform the predetermined processing or data generation based on the timing information generated by the timing information generation unit.

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2. A data combining apparatus as set forth in claim 1, further comprising a second processing unit for performing processing introducing a delay to the first data processed by the predetermined processing by the processing unit, and

wherein the timing information generation unit adds an amount of delay in the second processing unit and generates timing information indicating an input timing to the combining unit.

10 3. A data combining apparatus as set forth in claim 1, wherein the timing information generation unit generates timing information including a countdown up to start of a change of screen formation.

4. A data combining apparatus as set forth in claim 1, further comprising a superposing unit for superposing the timing information generated by the timing information generation unit to the first data or the second data, and

wherein the control unit makes the processing unit or the data generation unit correct the timing of processing or generation and perform the predetermined processing or the data generation based on the superposed timing information.

5. A data combining apparatus as set forth in claim 4, wherein the superposing unit superposes the

timing information on a blanking period of the first data or the second data relating to an image.

6. A data combining apparatus combining first data and second data relating to an image to form a
5 screen comprising:

a processing unit for performing
predetermining processing on the first data;

a data generation unit for generating the
second data;

10 a combining unit for combining the first data processed by the predetermined processing in the processing unit and the second data generated by the data generation unit; and

a timing information generation unit for
15 generating at least one of the timing information of the processing in the processing unit and the processing for generation in the data processing unit so that the combination of the first data processed by the predetermined processing in the processing unit and the
20 second data generated by the generation unit is performed at the same timing in the combining unit,

wherein the combining unit corrects and combines the data at the same timing based on the timing information generated by the timing information
25 generation unit.

7. A data combining apparatus as set forth in claim 6, further comprising a second processing unit for performing processing introducing a delay to the first data processed by the predetermined processing by the processing unit, and

wherein the timing information generation unit adds an amount of delay in the second processing unit and generates the timing information indicating an input timing to the combining unit.

8. A data combining apparatus as set forth in claim 6, wherein the timing information generation unit generates timing information including a countdown up to a start of a change of screen formation.

9. A data combining apparatus as set forth in claim 6, further comprising a superposing unit for superposing timing information generated by the timing information generation unit to the first data or the second data, and

wherein the combining unit corrects and combines the data at the same timing based on the superposed timing information.

10. A data combining apparatus as set forth in claim 9, wherein the superposing unit superposes timing information to a blanking period of the first data or the second data relating to an image.

11. . . A data combining method combining first data and second data relating to an image to form a screen, the method comprising:

5 a first step of performing predetermining processing on the first data;

 a second step of generating the second data; and

 a third step of combining the first data processed by the predetermined processing at the first
10 step and the second data generated by the second step, and

 wherein the timing information for the processing at the first step or the process for
 generation at the second step is generated so that the
15 combination of the first data processed by the predetermined processing at the first step and the second data generated at the second step is performed at the same timing in the third step, and

 at the first step or at the second step, the
20 timing for processing or generation is corrected based on the timing information to perform the predetermined processing or the data generation.

12. A data combining method as set forth in claim 11, further comprising:

25 performing processing introducing a delay to

the first data processed by the predetermined processing
at the first step as a fourth step, and

generating the timing information considering
the amount of delay of the fourth step.

5 13. A data combining method as set forth in claim
11, further comprising generating timing information
including a countdown up to the start of a change of
screen formation.

 14. A data combining method as set forth in claim
10 11, further comprising:

superposing the generated timing information
on the first data or the second data, and,

 at the first step or the second step,
correcting the timing of processing or generation to
15 perform the predetermined processing or the data
generation based on the superposed timing information.

 15. A data combining method as set forth in claim
14, further comprising superposing the timing information
to a blanking period of the first data or the second data
20 relating to an image.

 16. A data combining method combining first data
and second data relating to an image to form a screen
comprising:

 a first step of performing predetermining
25 processing on the first data;

a second step of generating the second data;
and

a third step of combining the first data
processed by the predetermined processing at the first
5 step and the second data generated by the second step,
and

wherein at least one of the timing
information for the processing at the first step and the
processing for generation at the second step is generated
10 so that the combination of the first data processed by
the predetermined processing at the first step and the
second data generated at the second step is performed at
the same timing in the third step, and
~~in the third step, the data is corrected and~~
15 combined at the same timing based on the timing
information.

17. A data combining method as set forth in claim
16, further comprising:

performing processing introducing a delay to
20 the first data processed by the predetermined processing
at the first step as a fourth step and

generating the timing information by
considering the amount of delay in the fourth step.

18. A data combining method as set forth in claim
25 16, further comprising generating timing information

including a countdown up to the start of a change of screen formation.

19. A data combining method as set forth in claim 16, further comprising:

5 superposing the generated timing information on the first data or the second data and,

at the first step or the second step, correcting the timing of processing or generation based on the superposed timing information to perform the
10 predetermined processing or data generation.

20. A data combining method as set forth in claim 19, further comprising superposing the timing information to a blanking period of the first data or the second data relating to an image.